

Shaking It Up: New and Nimble Designs for Lowand Moderate-Income Programs

June 22, 2015

Presentation Agenda





Introductions and Study Purpose



Determine the strategies of utilities, nonprofits, state agencies, and other program administrators working to create inventive new program models that help alleviate energy poverty and expand the breadth and depth of energy savings



Following the Recovery Act and Clean Air Act \rightarrow increased pressure on utilities and program administrators to establish energy efficiency as a resource and prepare for the future



Utilities and program administrators have responded to needs among lowerincome energy-efficiency programs in a variety of ways

Cadmus conducted a best practices analysis of income-qualified sector program design and delivery methods



	Effective mechanism to quickly assess the strengths and opportunities of key programs
Benefits	Focus finite program resources in the

of Best Practice Research Focus finite program resources in the areas that are most likely to improve or even optimize program performance

Provides more nuanced insights related to participant engagement





Industry reports, publicly available program information, prior evaluations, and institutional knowledge



Interviewed program administrators and industry experts on best practices topics

Best Practice Metrics

- Innovative methods of serving customers
- High or highly cost-effective energy savings
- Identify or reach a population that has not been widely served in the past
- Assess the community need and offer complementary services
- Provide more comprehensive services/generate more comprehensive savings

Methodology

Programs

Program Sponsor	State/Region	Literature Review	Interview
Ameren Missouri	Missouri	✓	
California CARES – CA IOU's	California	\checkmark	
Community Energy Project	Oregon	\checkmark	\checkmark
Connecticut Power and Light	Connecticut	✓	
Corporation for Enterprise Development	Montana	✓	
Emera Maine	Maine	✓	
Efficiency Vermont	Vermont	✓	\checkmark
Focus on Energy	Wisconsin	✓	
Iowa Utilities Association	Iowa	\checkmark	
National Center for Appropriate Technology (NCAT)	National	\checkmark	\checkmark
Massachusetts Program Administrators	Massachusetts	✓	\checkmark
National Grid	Massachusetts	✓	
Northwest Energy Efficiency Alliance	Pacific Northwest	\checkmark	
PacifiCorp	Pacific Northwest	\checkmark	
Puget Sound Energy	Washington	\checkmark	
The Rural Renewable Energy Alliance (RREAL)	Minnesota	✓	l I
R.J. Karg and Associates	National		\checkmark
Texas Investor-Owned Utilities	Texas	\checkmark	
Xcel Energy	Colorado	✓	\checkmark

Methodology

Program Administrator Interviews





- ACEEE exemplary program
- Portfolio of IQ programs: SF, MF, MH
- Coordinated approach with many other organizations
- ass save

Mass Save –

- ACEEE exemplary program
- Portfolio of low-income programs: SF, MF, Moderate Income



Xcel Energy-

- ACEEE exemplary program
- Portfolio of IQ programs: SF, MF, Energy education



- Community Energy Project
 - Small non-profit providing small measure weatherization and training
 - High savings for dollars expended, very engaged in the community, outreach and marketing



Methodology

Industry Expert Interviews



Rick Karg – Low-income weatherization trainer and technical expert. Has written technical standards and weatherization guides for: the Midwest, NM, ME, NH, ND, WV



- NATIONAL CENTER FOR APPROPRIATE TECHNOLOGY
- Sherry Vogel manager of the LIHEAP Clearinghouse database which catalogues energy assistance and energy efficiency programs offered by states, utilities and the federal government.



Themes and Focus Areas

- Innovative program design models
- Successful program delivery strategies
- Proven marketing and outreach tactics
- Innovative or emerging technologies

INNOVATIVE PROGRAM DESIGNS

Portfolio Approach

Manufactured Homes Programs

Multifamily Programs

Customer DIY Installation Programs



Portfolio Approach

Offering a suite of low-income programs helps a broader range of customers and expands opportunities for energy savings

Serve Broader Population	 Targets market niches and customer sub-segments Opportunity to reach participants that may not participant in traditional program offerings
Meet Customer- Specific Needs	 Weatherization, energy education, energy efficiency kits Target both single family and multifamily customers
ACEEE Best	 Customers have multiple opportunities to learn about and
Practice	implement energy efficiency measures Program dollars are distributed equitably across the segment
Capture Deeper	 Range of initiatives that reach as many low-income households
Savings	as possible



Manufactured Home Programs

Duct Sealing Programs

- Offered in MI, WA
- PSE: Parks served all at once, coupled with small measure installations

Manufactured Home Replacements

- Offered in VT, MT, ME, AZ
- Long-term process
- Need to team with other funding sources
- Decommissioning of old houses

Moderate Income Programs

Programs have leveraged the Income Qualified infrastructure to offer highly cost-effective savings for a population unable to participate in traditional programs (60 – 100% AMI, 200-250% FPL)



Multifamily Programs

There are opportunities to further serve this hard-to-reach population and generate significant energy savings with innovative services and additional measure offerings

Whole-Building Program

- Offered in MA, VT
- Team with other funding sources
- Comprehensive measures
- Agency or implementer approach

Enhanced In-Unit Upgrades

- Offered in MO
- Some non-traditional measures: replacement of older room AC, cleaning central AC
- High touch program
- Agency and implementer approach

Customer DIY Installation

Providing customers with education and tools to make energy efficient upgrades on their own provide cost-effective savings and promotes energy use awareness



SUCCESSFUL PROGRAM DELIVERY STRATEGIES

Pairing Energy Efficiency with Rate Assistance

Marketing and Outreach Tactics



Pairing Energy Efficiency with Rate Assistance

Provide access to otherwise hard-to-reach customers

Opportunity to leverage funding for bulk fuel customers

Consumers Energy, MI

CARE Pilot Program

Verify participant eligibility for weatherization services

California Alternate Rates for Energy

Fixed percentage reduction on monthly bills

Focus marketing to hardto-reach populations

National Grid, MA

Rate assistance programs provide entry point for EE services to moderateincome customers

Partnerships with CAAs, affordable housing networks, and community development corporations



Marketing and Outreach Tactics

Word of Mouth	 Most participants learn of the program through a recommendation of friends or family
Strategic Partnerships	 ACEEE – "relationship building is important for improving overall program participation and that customers' must see the partner organizations as trusted information sources and/or experts"
Overcome Language Barriers	 Provide information in simple language, and in multiple languages, with a minimum of technical information
Consistency in Program Offerings	 Information about new program opportunities take longer to spread in low-income communities Offer consistent programs for at least a couple of years - lead to increases in participation

INNOVATIVE TECHNOLOGIES

Ductless Heat Pumps

Room Air Conditioners

Solar Air Heat



Different emerging technologies will make sense for different regions, building types and utility capacity



Ductless Heat Pumps

- Offer significant savings over baseboard heat: 2,500 to 3,200 annual kWh found in Connecticut
- Currently popular retrofit for multifamily housing
- Can provide very efficient cooling; savings potential if replacing less efficient technologies





Room Air Conditioner Replacement

- Offered in Missouri in Multifamily, Ohio in Single Family
- RACs in IQ homes are often older and less efficient
- Often cooling larger spaces than rating
- High savings 500 kWh per year



Study Findings

Solar Air Heat

- Rural Renewable Energy Alliance in Minnesota
- Appropriate for Northern states, rural locations
- High savings potential 2,100 kWh
- Partnership opportunity

CADMUS



Pulling it all together

IQ programs aim to help as many households as possible

Understanding best practices will help each entity reach households in best possible way



Consumers Energy IQ Program

Program utilizes several design and delivery methods identified as best practices

Portfolio of Program Initiatives

- Serves single family and multifamily customers
- Manufactured homes duct sealing

Strategic Partnerships

• Collaborate with local agencies

Pairs Energy Efficiency with Rate Assistance

• CARE program

Consistent Outreach Message through Program Branding

• Helping Neighbors



CONSUMERS ENERGY Helping Neighbors Program *Income-Qualified Energy Efficiency Assistance*



Chad D. Miller Senior Program Manager 6/22/15



Design and overview

- Multi-faceted program provides Consumers Energy with opportunities to touch multiple niche markets with a portfolio approach
- Deliver energy efficiency products, services and education
 - No cost energy efficiency upgrades to Michigan households
 - Multifamily and Single family
 - Eligibility: At or below 200% FPL
- 2015 Program targets:
 - 75,000 MCF | 3,800 MWh
 - \$11.6M

Reaching our customers

• HIGHLIGHTS:

- Customers served:
 - 2009: 7,012
 - 2010: 13,251
 - **2011:** 12,441
 - **2012:** 21,791
 - **2013:** 9,898
 - **2014:** 13,612
- Prescriptive approach to focus delivery of more impactful measures
- Improved customer experience through a multi-touch approach (energy efficiency journey) and education

BEST PRACTICES:

- Portfolio Approach
- Targeted marketing and highinvolvement community outreach strategies
- Developed a unique brand identity for the program



Empowering Households. Building Communities.



Helping Neighbors began as a grass roots, targeted initiative in June 2011, but over the past two years has grown tremendously into the equitable brand as we know it today as a portfolio approach to meeting customer needs.

- Nurtured relationships
- Built trust within the community
- Positive public relations





Multifamily

- Turn-key solution providing energy efficiency to IQ multifamily sector
 - In-unit measure upgrades
 - Future opportunities:
 - Whole building and enhanced in-unit upgrades
- Market saturation continues to threaten the viability of current program design – need to innovate
 - Collaboration with market-rate rebate program
 - Maximizing cost-effectiveness on implementation
 - Ability to leverage established infrastructure and outreach model



SAVINGS THE ENTIRE COMMUNITY CAN GET BEHIND

The Consumers Energy Helping Neighbors Multifamily Program makes it easy for qualified properties and your tenants to be energy smart. We'll help you:

- Implement FREE energy efficiency upgrades
- Strengthen the community through energy efficiency education
- Promote sustainable behaviors
- · Increase the quality and comfort of your properties

PRODUCTS AND SERVICES MAY INCLUDE:

- Programmable thermostats
- Water heater pipe wrap
 High efficiency showerheads

LED bulbs

- High efficiency faucet aerators
- Furnace tune-ups

The Helping Neighbors Multifamily Program offers no-cost energy assistance to income-qualified communities. Contact us today to start saving energy!

(877) 448-9433 ConsumersHelpingNeighbors.com

 To be eligible, at least 56% of poperty residents must be at or helew 200% of fideral powerty guidelines. Properties must be heated by Consumers Energy natural gas. Items available will vary based on existing equipment and building mechanical systems. Other energy enforcing organism may be available for alternative building types. Furnace tune-ups are contrigent upon ubling mechanical system.



Single family



The Helping Neighbors Program provides a wide range of energy saving measures and services, which may include:

ENERGY EFFICIENCY PRODUCTS

- LED bulbs
- Furnace tune-up
- · Air sealing
- High-efficiency showerhead
- Programmable thermostat
- · Water heater pipe wrap



- Main initiative among the offerings within the Helping Neighbors portfolio:
 - Phase one: Entry point for customers (basic measures and services)
 - Water heating efficiency , lighting measures, and carbon monoxide testing
 - Phase two: Greater impact on energy efficiency through more comprehensive measures and services (based on home's qualification for more comprehensive services)
 - Phase one + blower-door testing, air sealing, insulation, furnace tuneups, etc.
 - Energy education via online tool, leave behinds and dialogue with technicians
 - Integrated marketing: Media placements, direct marketing and outreach
- A la carte option for premium measures
 - Measures: Furnace replacements (95 98 percent) AFUE, refrigerator replacements, crawlspace insulation and duct sealing (15 percent reduction)
 - All costs paid by Program
- Energy Education (EASE)





LOGIN ONLINE



CLIENT INTERFACE



- Multi-tiered online platform providing energy education to influence longterm behavior modification
 - Reinforces learnings provided in customer report

Online Energy Education portal providing personalized home energy report.



Leveraged whole house

- Collaboration between community action agencies and community organizations
 - Leverage public funds to reduce the cost burden
 - Supports ability to engage more qualified households
 - Expands lead generation through warm leads identified by participating agencies



- Improves customer satisfaction by touching customers on long agency waitlists
- Impacts growth on statewide infrastructure by building industry technical knowledge through energy efficiency training
- Builds statewide infrastructure in energy efficiency by supporting Program's participating agencies with technical training to improve their skills and energy efficiency knowledge
- Supports local economy by identifying projects for Program's participating agencies to keep and expand their work in Michigan



The ARRA Era

During ARRA

- Community Action Agency (CAA) network
 - Well-funded
 - Leveraged dollars
 - Substantial energy efficiency participation, including major weatherization projects
 - Benefits of an existing, trained workforce

Life After ARRA

- Limited funding
 - CAAs can no longer meet the demands of program needs
- Meeting the needs of a changing landscape
 - New program design -HELPING NEIGHBORS
 - Single-family initiative
 - Weatherization (HN & CAA model)
 - Multifamily initiative
 - Began expanding network of other non-profit organizations
 - Created opportunities to leverage funding categories outside ARRA



CARE Program













Customer Benefits

- Affordable payment program that provides long-term, proactive, and accountable assistance *before* crisis
- 40% bill credit each month
- Gradual past due balance forgiveness as a reward for regular payments
- Energy education and free in-home weatherization
- \$25 gift for completing energy home visit

Accomplishments

- \$15.7 million investment from state of Michigan
- More than 18,000+ customers enrolled
- Energy education offered to all participants
- 4,000+ (Up to 5,000) customers offered EE upgrades (valued at \$5.1 million)





Why this (portfolio approach) works?

- Comprehensive portfolio of initiatives
 - Responsive to market conditions
 - Tailored to customers needs
- Agency-quality marketing deployments governed by overarching strategic communications plan
 - Geotargeted placements to maximize costs and diminish waste
 - Media placements, direct marketing and collateral library
 - Campaigns are sized to fit current customer priorities (e.g., seasonal) and program goals
 - Drives equity, credibility and interest
 - Digital engagements to optimize customer engagement



Spring direct mail



Winter exterior bus ad



Outreach



Consumers Energy Count on Us

Customer Satisfaction!





Next Steps (Evolution of Program)

Website Refresh

- Self-scheduling
- Agency Engagement Tool
 - Access to EASE (education)
 - Agency Requests
 - Presentations
 - Collateral
- Agency Portal
 - Measure Reservations
 - Application Submittals
 - Electronic Application Processing
 - Status Updates



THANK YOU!



Count on Us

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CADMUS

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- Novak, S., M. Kushler, P. White, and D. York. Leaders of the Pack: ACEEE's Third National Review of Exemplary Energy Efficiency Programs. Washington, DC. 2013.
- Cadmus. *Iowa 2013 Energy Wise Program.* Prepared for Iowa Utility Association. 2014.
- Kaiser Family Foundation. Distribution of the total population by federal poverty level. Accessed January 26, 2015. <u>http://kff.org/other/state-indicator/population-up-to-200-fpl/</u>
- U.S. Energy Information Administration. Residential Energy Consumption Survey, Table HC9.9 Household Demographics of Homes in Midwest Region, Divisions, and States.
 2009. Available online: http://www.eia.gov/consumption/residential/data/2009/#undefined
- Talbot, J. "Mobilizing Energy Efficiency in the Manufactured Housing Sector." ACEEE Research Report A124, pg. 4. Washington, DC. 2012. Available online: <u>http://www.aceee.org/research-report/a124</u>

- Banker, H., and R. LeBaron. Toward a Sustainable and Responsible Expansion of Affordable Mortgages for Manufactured Homes. Corporation for Enterprise Development. 2013. Available online: <u>http://cfed.org/assets/pdfs/IM_HOME_Loan_Data_Collection_Project_Report.pdf</u>
- The Building Performance Institute offers a specialized certification for staff working on manufactured homes.
- Robinson, D., and A. West. Manufactured Home Duct Sealing Pilot Program Impact Evaluation. Prepared for the Energy Trust of Oregon, Portland, Oregon. 2004. The Vermont Energy Investment Corporation provides a similar program.
- Reichmuth, H. Independent M&V Report Puget Sound Energy Manufactured Home Duct Sealing (MHDS) Program. Prepared for Puget Sound Energy. Prepared by Ucons LLC. 2013. Available online: https://conduitnw.org/ layouts/Conduit/FileHandler.ashx?RID=1839



- Dillard, S. and N. Riegler. "Manufactured Housing Innovation Project." Vermont Housing and Conservation Board. 2013. Accessed November 2014. <u>http://www.vhcb.org/mhip/</u>
- National Consumer Law Center. Manufactured Housing Resource Guide: Weatherization and Replacement of Homes. 2010. Available online: <u>http://cfed.org/assets/pdfs/weatherization_replacement_of_homes.pdf</u>
- Low Income Home Energy Assistance Program Clearinghouse. U.S. Department of Health & Human Services. "LIHEAP Funds for Furnace Repair and Replacement: Issue Brief #6." 2014. Available online: <u>http://liheap.ncat.org/pubs/LCIssueBriefs/furnace/Furnaceprograms.pdf</u>
- Focus on Energy. "Residential Rewards and Enhanced Rewards." Last updated 2014. Accessed November 2014: <u>https://focusonenergy.com/residential/efficient-products-appliances/residential-rewards</u>



- Interstate Power and Light Company, an Alliance Energy Company. Annual Report and Additional Information. Docket No. EEP-08-01 2012. 2013. Available online: <u>http://alliantenergy.com/wcm/groups/wcm_internet/@int/documents/document/m_daw/mdey/~edisp/012897.pdf</u>
- Mass Save. Massachusetts Joint Statewide Three-Year Electric and Gas Energy Efficiency Plan. D.P.U. 12-100 to D.P.U. 12-111. 2012. Available online: <u>http://www.mass.gov/eea/docs/doer/energy-efficiency/statewide-electric-and-gas-three-year-plan.pdf</u>
- U.S. Energy Information Administration, Residential Energy Consumption Survey, *Table HC2.5 Structural and Geographic Characteristics of U.S. Homes, by Household Income,* 2009. Available online: <u>http://www.eia.gov/consumption/residential/data/2009/#undefined</u>



- Nexant and Cadmus. Ameren Missouri CommunitySavers Impact and Process Evaluation: Program Year 2013. Prepared for Ameren Missouri. 2014.
- Mass Save. "Low Income Multifamily Energy Retrofits" Accessed November 2014: <u>http://leanmultifamily.org/</u>
- Vermont Fuel Efficiency Partnership. "Total retrofit projects 2009-2012." 2013. Accessed November 2014: <u>http://vfep.org/wp-content/uploads/2013/02/VFEP-2012-Progress-Rpt.pdf</u>
- Xcel Energy. Demand-Side Management Annual Status Report, Electric and Natural Gas Public Service Company of Colorado. April 1, 2014. Docket No. 11A-631EG. 2013. Available online:

http://www.xcelenergy.com/staticfiles/xe/Regulatory/Regulatory%20PDFs/CO-DSM/2013-CO-DSM-Annual-Status-Report.pdf



- Beegle, D., Ph.D. Overcoming the Silence of Generational Poverty. Talking Points, October/November 2003.
- U.S. Department of Transportation. "Transportation Planning Capacity Building: Public Involvement Techniques." Accessed November 2014: <u>http://www.planning.dot.gov/publicinvolvement/pi_documents/1a-a.asp</u>
- Cromwell, J., R. Colton, S. Rubin, C. Herrick, J. Mobley, K. Reinhardt, and R. Wilson. Best Practices in Customer Payment Assistance Programs. Pg. 122. Water Research Foundation. 2010. Available online: <u>http://www.waterrf.org/PublicReportLibrary/4004.pdf</u>
- National Action Plan for Energy Efficiency. Pgs. 6-10 and 6-35. July 2006. Available online: <u>http://www.epa.gov/cleanenergy/documents/suca/napee_report.pdf</u>



- Colton, R., M. Sheehan, and P. Fisher. *Ratepayer-Funded Low-Income Energy Programs: Performance and Possibilities*. Prepared for Applied Public Policy Research Institute for Study and Evaluation. 2007. Available online: <u>http://www.appriseinc.org/reports/NLIEC%20Multi-Sponsor%20Study.pdf</u>
- California Public Utilities Commission. "Low Income Energy Assistance Programs." Office of Ratepayer Advocates. Accessed November 2014: <u>http://www.ora.ca.gov/lowincomeenergyassistanceprogram.aspx</u>
- Interview with LIHEAP Clearinghouse, October 9, 2014.
- Interview with National Grid, October 17, 2014.
- Rural Renewable Energy Alliance. "Solar Assistance: Apply For Solar Assistance." Accessed November 2014: <u>http://www.rreal.org/solar-assistance/apply-for-solar-assistance/apply-for-solar-assistance/</u>



- Storm, P., D. Baylon, A. Armstrong, and J. Harris. "Integrated Ductless Heat Pump Analysis: Developing an Emerging Technology into a Regional Efficiency Resource." Paper presented at ACEEE proceedings, Washington, DC. 2012. Available online: <u>http://www.aceee.org/files/proceedings/2012/data/papers/0193-000064.pdf</u>
- EMI Consulting. Emera Maine Heat Pump Pilot Program Evaluation. Prepared for Emera Maine. 2014. Available online: <u>http://www.emiconsulting.com/assets/Emera-Maine-Heat-Pump-Final-Report-2014.09.30.pdf</u>
- Oregon Department of Energy. "Energy Conservation: Ductless Heat Pumps." Accessed November 2014: <u>http://www.oregon.gov/ENERGY/CONS/Pages/res/tax/HVAC-DuctlessHP.aspx</u>

